

REMARKS

This Amendment is responsive to the Final Office Action mailed June 14, 2007. Applicants request reconsideration of the application in view of the following remarks.

Claims 1-8, 10, 11, 14 and 21 are currently pending in this application and are subject to examination. The specification paragraph [0038] has been amended by deleting "similar to" and adding "described in." Claims 1, 10, 11, 14 and 21 have been amended, and Claim 20 has been canceled for clarity of the invention.

Claims 10 and 11

Claims 10 and 11 were withdrawn by the Examiner on grounds that these claims are directed to a non-elected invention following a restriction requirement. Applicants have amended these claims to delete reference to adhering or joining by thermoforming. As amended, claims 10 and 11 should be maintained in this application.

Rejection of Claims 2 and 14 Under 35 U.S.C § 112, Second Paragraph

Claims 2 and 14 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, the Examiner asserted that the claims were confusing for failing to particularly point out what criteria the claimed indentation force deflection (IFD) values are based. The Applicants respectfully traverse this rejection with respect to all pending claims based on the amended specification.

IFD₂₅ is “the force required to compress the foam to 25% of its original thickness or height,” and is obtained based on the standard method ASTM D 3574. Applicants compared the test procedure for the data reported in Table 1 with the ASTM D 3574 test procedure and confirm that the standard procedure was used when such data was determined. Persons of ordinary skill in this field readily would understand the description set out in the specification at paragraph [0038] and could reproduce the testing results. The Examiner appears to assert that the phrase “similar to” created uncertainty. Applicants have deleted this phrase to obviate this concern. Therefore, the pending claims that include the IFD₂₅ parameter are sufficiently definite, and Applicants respectfully request that the rejection of claims 2 and 14 under 35 U.S.C. 112, second paragraph, be withdrawn.

**Rejection of Claims 1-9, 14, 20 and 21
under 35 U.S.C. § 102(b)**

Claims 1-9, 14, 20 and 21 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,804,113 (issued Sep. 8, 1998) to Blackwell et al. Specifically, the Examiner asserts that Blackwell “discloses preparations of polyurethane foams materials having densities as claimed prepared by mixing and reacting polyols meeting those as claimed by applicants, isocyanates including TDI and MDI in amounts as required by applicants’ claims, water as a blowing agent, catalysts, surfactants, fire retardants, and other additives under controlled and reduced pressures as claimed by applicants and wherein the reactive mixtures are placed against barrier films during formation”. Applicants respectfully traverse the Examiner’s rejection in view of the amended Claims 1 and 14, and the following remarks.

Claim 1 recites a process for producing a thermoformable polyurethane foam-containing sound insulative laminate, comprising, in part, “preparing a foam-forming composition,” “forming the polyurethane foam from the foam-forming composition” under vacuum conditions to create a lower density foam, and “joining a layer of the polyurethane foam to a barrier layer.” In particular, Claim 1 as amended specifies that the barrier layer comprises filled asphalt, filled EVA, filled EPDM, filled rubber, filled PVC, bitumen, or a combination of any of these materials.

Claim 14 is to a sound insulator for an instrument panel, comprising, in part, “a flame retardant, thermoformable, flexible, open celled polyurethane foam” where such foam is in the form of sheet or slab and “a reinforcement, backing or decorative covering” is applied to at least one surface of the foam. In particular, Claim 14 as amended specifies that the covering comprises filled asphalt, filled EVA, filled EPDM, filled rubber, filled PVC, bitumen, or a combination of any of these materials.

Blackwell does not disclose each and every limitation of claims 1 and 14. Blackwell does not disclose preparation of any sound insulative laminates, and does not join a polyurethane foam to a barrier layer or covering to create a sound insulative laminate. Furthermore, Blackwell does not teach the specific barrier layer (filled asphalt, filled EVA, filled EPDM, filled rubber, filled PVC, bitumen, or a combination of any of these materials) as required in amended claim 14. Instead, Blackwell teaches generally that slabstock polyurethane can be made continuously in equipment that controls the foaming pressure range. (*See* Blackwell, Column 1, lines 9 through 67, and Column 2, lines 1-67, and Column 3, lines 1-53).

Blackwell permits the foam-forming mix to spill onto a bottom paper or film 10 so that it may be conveyed away from the mix head. This bottom paper or film 10 is conventional in slabstock foam equipment. It is not a “barrier layer” or “covering” within the scope of applicants’ claims. Blackwell’s bottom paper or film prevents the foam from sticking to the conveyor. This paper or film is removed from the foam bun when the foam is further processed for end use. The paper or film is not “joined” to the foam, such as by thermoforming, so as to remain connected to the foam. Moreover, the paper or film does not have the necessary high density to serve as a sound insulator to absorb airborne noise. “Barrier” in applicants’ “barrier layer” is intended to have sound adsorptive quality. To clarify this, claims 1 and 14 were amended to further specify the barrier layer composition.

Thus, claims 1-8, 14, and 21 distinguish from Blackwell. Claim 9 was canceled. Accordingly, Applicants respectfully request that the rejection of pending claims 1-8, 14, and 21 under 35 U.S.C. § 102(b) in light of Blackwell et al. be withdrawn.

**Rejection of Claims 1-9, 14, 20,
and 21 under 35 U.S.C. § 103(a)**

Claims 1-9, 14, 20, and 21 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 6,372,812 (issued Apr. 16, 2002) to Niederoest et al. According to the Examiner, Niederoest “discloses preparations of polyurethane foams materials prepared by mixing and reacting on a conveyor belt polyols meeting those as claimed by applicants, isocyanates including TDI and MDI in amounts as required by applicants’ claims, water as a blowing agent, catalysts, surfactants, fire retardants, and

other additives under controlled and reduced pressures as claimed by applicants and wherein the reactive mixtures are placed against barrier films during formation.” The Examiner admits the densities of polyurethane foams disclosed in Niederoest do not meet Applicants’ claims.

Applicants respectfully traverse the Examiner’s rejection in view of amended Claims 1 and 14, and the following remarks. Niederoest does not suggest nor teach all the claim limitations. Niederoest does not join the polyurethane foams to a “barrier layer” to form sound insulative laminates as required in Applicants’ claims. Rather, Niederoest wants foams for making furniture and seat cushions. Similar to the distinction made with respect to Blackwell above, Niederoest causes the foam-forming mixture to spill onto a moving conveyor. The foam that rises as it is conveyed on the conveyor is not “joined” to the conveyor to form a sound insulative laminate. It is not joined, such as by thermoforming. The conveyor 28 forms a continuous loop that returns to receive new foam material. (*See* Niederoest, Column 2, lines 54 through Column 3, lines 41).

Niederoest does not teach or suggest that the cushioning foams be laminated to a barrier layer material or that the cushioning foams be laminated to improve sound insulative quality. Even if the Examiner were to maintain his view that the reactive mixtures for forming polyurethane foam are placed against barrier films during formation, Niederoest does not disclose any of the claimed barrier films. In particular, Niederoest does not teach a barrier layer of filled asphalt, filled EVA, filled EPDM, filled rubber, filled PVC, bitumen, or a combination of any of these materials. As such, Niederoest does not suggest to or teach a skilled person to make any laminate, much less such a laminate with sound insulative quality.

For these reasons, the Examiner has failed to establish a *prima facie* case of obviousness in view of Niederoest. Accordingly, Applicants respectfully request that the rejection of pending claims 1-8, 10, 11, 14, 20, and 21 under 35 U.S.C. § 103(a) in light of Niederoest, et al be withdrawn.


Conclusion

In view of the foregoing, the rejections should be withdrawn and all pending claims should be allowed.

No fee is believed due for this response. If there are any fees due in connection with the filing of this response, such as a fee for an extension of time, such extension is requested and the fee should be charged to Deposit Account No. 03-2775.

Respectfully Submitted,
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